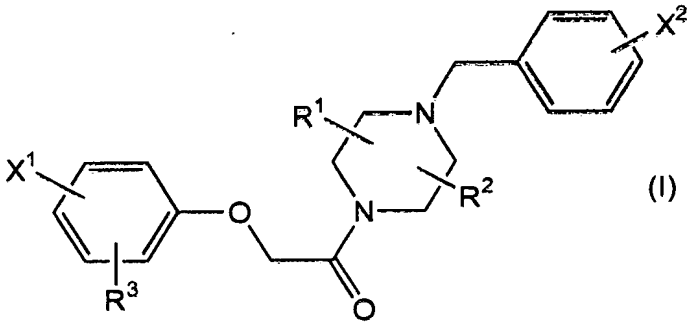
The following listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended): A method of diagnosing Alzheimer's disease in a human patient which comprises:

administering to a patient in need of such diagnosis a compound according to ~~of~~ formula (I):



(I)

wherein:

X^1 and X^2 are each independently halo;

R^1 and R^2 are each independently hydrogen or alkyl; and

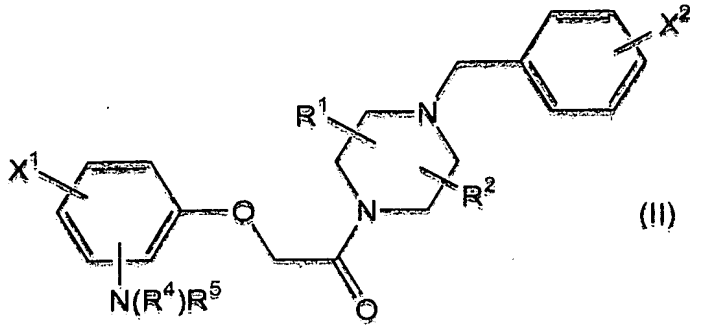
R^3 is hydrogen, amino, monoalkylamino, dialkylamino, monoaralkylamino, alkylcarbonylamino, alkenylcarbonylamino, haloalkylcarbonylamino, arylcarbonylamino, alkoxyalkylcarbonylamino, alkoxycarbonylalkylcarbonylamino, glycinamido, monoalkylglycinamido, arylcarbonylglycinamido, aminocarbonylglycinamido, (aminocarbonyl)(alkyl)glycinamido, (alkoxyalkylcarbonyl)glycinamido, ureido, monoalkylureido, monoarylureido, monoaralkylureido, or alaninamido;

and wherein either one of X^1 or X^2 is selected from the group of ^{123}I, ^{125}I, ^{128}I, ^{131}I, ^{75}Br, ^{76}Br, ^{80}Br and ^{18}F; or wherein one of the carbon atoms in the compound is ^{11}C;

or a pharmaceutically acceptable salt thereof; and

measuring the radioactivity arising from the administration of the compound to said patient either by using a gamma camera or by positron emission tomography (PET).

2. **(Currently Amended):** A method of diagnosing Alzheimer's disease in a human patient which comprises administering to said patient in need of such diagnosis a compound according to formula (II):



(II)

wherein

X^1 and X^2 are each independently halo;

R^1 and R^2 are each independently hydrogen or alkyl; and

R^4 is hydrogen; and

R^5 is a group having a radical containing a chelator capable of binding a radioactive metal atom selected ~~chosen~~ from the group of ^{99m}Tc, ^{186}Re and ^{188}Re;

or as a complex with ^{99m}Tc, ^{186}Re and ^{188}Re;

or a pharmaceutically acceptable salt thereof; and

measuring the radioactivity arising from the administration of the compound to said patient either by using a gamma camera or by positron emission tomography (PET).

3. **(Previously Presented):** A method according to claim 1, wherein said compound binds to chemokine receptor CCR1 and passes the blood-brain barrier.

4. **(Previously Presented):** A method according to claim 2, wherein said compound binds to chemokine receptor CCR1 and passes the blood-brain barrier.

5. **(Previously Presented):** A method according to claim 1, wherein R^1 is methyl at the 2-position of the piperazinyl radical and R^2 is methyl at the 5-position of the piperazinyl radical.

6. **(Previously Presented):** A method according to claim 2, wherein R^1 is methyl at the 2-position of the piperazinyl radical and R^2 is methyl at the 5-position of the piperazinyl

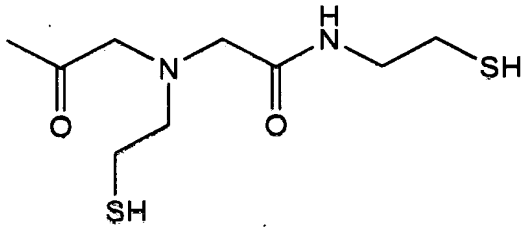
radical.

7. **(Previously Presented):** A method according to claim 1, wherein R^1 is methyl at the 2-position of the piperazinyl radical and R^2 is hydrogen.

8. **(Previously Presented):** A method according to claim 2, wherein R^1 is methyl at the 2-position of the piperazinyl radical and R^2 is hydrogen.

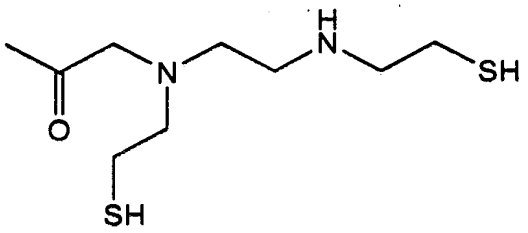
9. **(Previously Presented):** A method of claim 1, wherein X^1 is chloro at the 4-position of the phenyl radical and X^2 is a ^{18}F atom at the 4-position of the phenyl radical.

10. **(Previously Presented):** A method of claim 2, wherein said chelator is of formula (III):



(III)

11. **(Previously Presented):** A method of claim 2, wherein said chelator is of formula (IV):



(IV)

12. **(Previously Presented):** A method of claim 10, wherein in group R^5 a linker moiety is present between said chelator and the reminder of the compound.

13. **(Previously Presented):** A method of claim 11, wherein in group R^5 a linker moiety

is present between said chelator and the reminder of the compound.

14. (Previously Presented): A method of claim 12, wherein the linker moiety is -C(O)-CH_2-N(H).

15. (Previously Presented): A method of claim 13, wherein the linker moiety is -C(O)-CH_2-N(H).

16. (Previously Presented): A method according to claim 1, wherein said compound is a monochloride salt.

17. (Previously Presented): A method according to claim 2, wherein said compound is a monochloride salt.

18. (Previously Presented): A method according to claim 1, wherein said compound is a dichloride salt.

19. (Previously Presented): A method according to claim 2, wherein said compound is a dichloride salt.

20. (Cancelled)

21. (Cancelled)

22. (Previously Presented): A method according to claim 1, wherein
X^1 and X^2 are each independently bromo, chloro, iodo or fluoro;
R^1 and R^2 are each independently hydrogen, methyl, ethyl, *n*-propyl, 1-methylethyl, *n*-butyl, 1,1-dimethylethyl, *n*-pentyl, or *n*-heptyl; and
R^3 is hydrogen, amino, methylamino, ethylamino, propylamino, dimethylamino, methylethylamino, diethylamino, dipropylamino, ethylpropylamino, benzylamino, (3,4,5-trimethoxybenzyl)amino, (4-chlorobenzyl)amino, acetylamino, ethylcarbonylamino, *n*-propylcarbonylamino, ethenylcarbonylamino, prop-2-enylcarbonylamino, but-2-enylcarbonylamino, trifluoromethylcarbonylamino, trifluoromethylcarbonylamino, 2-

bromoethylcarbonylamino, (4-methoxyphenyl)carbonylamino, (4-fluorophenyl)carbonylamino, (4-chlorophenyl)carbonylamino, alkoxyalkylcarbonylamino wherein the alkoxy and alkyl potions each have 1 to 8 carbon atoms, ethoxycarbonylmethylcarbonylamino, methoxycarbonylmethylcarbonylamino, (2-ethoxycarbonylethyl)carbonylamino, (2-methoxycarbonylethyl)carbonylamino, glycinamido, -N(H)-C(O)-CH_2-N(H)R_a, phenylcarbonylglycinamido, (4-fluoro-3-trifluoromethylphenyl)carbonylglycinamido, (4-fluorophenyl)carbonylglycinamido, aminocarbonylglycinamido, -N(H)-C(O)-CH_2-N(R_a)-C(O)-NH_2, (methoxyacetyl)glycinamido, (ethoxyacetyl)glycinamido, ureido, -N(H)-C(O)-N(H)R_a, -N(R_a)-C(O)-NH_2, -N(H)-C(O)-N(H)R_b, -N(R_b)-C(O)-NH_2, -N(H)-C(O)-N(H)R_d, -N(R_d)-C(O)-NH_2, or alaninamido;

R_a is an alkyl radical having from one to eight carbon atoms;

R_b is a phenyl or naphthyl radical which is optionally substituted by one or more substituents selected from the group consisting of bromo, chloro, iodo or fluoro, alkyl having from one to eight carbon atoms, alkoxy having from one to eight carbon atoms, haloalkyl having from one to eight carbon atoms, haloalkoxy having from one to eight carbon atoms, nitro, amino, -N(H)R_a, and -N(R_a)R_a where each R_a is independently alkyl having from one to eight carbon atoms; and

R_d is an aralkyl group in which the alkyl portion has one to eight carbon atoms and the aryl portion is R_b;

wherein either one of X^1 or X^2 is selected from the group of ^{123}I, ^{125}I, ^{128}I, ^{131}I, ^{75}Br, ^{76}Br, ^{80}Br and ^{18}F or one of the carbon atoms in the compound is ^{11}C.

23. (Previously Presented): A method according to claim 1, wherein

X^1 and X^2 are each independently bromo, chloro, iodo or fluoro; and

R^1 and R^2 are each independently hydrogen, methyl, ethyl, *n*-propyl, 1-methylethyl, *n*-butyl, 1,1-dimethylethyl, *n*-pentyl, or *n*-heptyl.

24. (Previously Presented): A method according to claim 2, wherein in group R^5 a linker moiety is present between said chelator and the reminder of the compound, wherein the linker moiety is an alkyl radical having one to ten carbon atoms, wherein the alkyl radical optionally contains one to ten -C(O)-groups, one to ten -C(O)N(R)- groups, one to ten -N(R)C(O)- groups, one to ten -N(R)- groups, one to ten -N($R)_2$ groups, one to ten hydroxy

groups, one to ten -C(O)OR- groups, one to ten oxygen atoms, one to ten sulfur atoms, one to ten nitrogen atoms, one to ten halogen atoms, and one to ten aryl groups.

25. (Previously Presented): A method according to claim 10, wherein in group R^5 a linker moiety is present between said chelator and the reminder of the compound, wherein the linker moiety is an alkyl radical having one to ten carbon atoms, wherein the alkyl radical optionally contains one to ten -C(O)-groups, one to ten -C(O)N(R)- groups, one to ten -N(R)C(O)- groups, one to ten -N(R)- groups, one to ten $-N(R)_2$ groups, one to ten hydroxy groups, one to ten -C(O)OR- groups, one to ten oxygen atoms, one to ten sulfur atoms, one to ten nitrogen atoms, one to ten halogen atoms, and one to ten aryl groups.

26. (Previously Presented): A method according to claim 11, wherein in group R^5 a linker moiety is present between said chelator and the reminder of the compound, wherein the linker moiety is an alkyl radical having one to ten carbon atoms, wherein the alkyl radical optionally contains one to ten -C(O)-groups, one to ten -C(O)N(R)- groups, one to ten -N(R)C(O)- groups, one to ten -N(R)- groups, one to ten $-N(R)_2$ groups, one to ten hydroxy groups, one to ten -C(O)OR- groups, one to ten oxygen atoms, one to ten sulfur atoms, one to ten nitrogen atoms, one to ten halogen atoms and one to ten aryl groups.

27. (Currently Amended): A method according to claim 1 wherein the radioactive dose ~~does~~ administered to said patient is 1 to 100 mCi per application.

28. (Currently Amended): A method according to claim 2, wherein the radioactive dose ~~does~~ administered to said patient is 1 to 100 mCi per application.

29. (Currently Amended): A method according to claim 3, wherein the radioactive dose ~~does~~ administered to said patient is 1 to 100 mCi per application.

30. (Currently Amended): A method according to claim 4, wherein the radioactive dose ~~does~~ administered to said patient is 1 to 100 mCi per application.

31. (Previously Presented): A method according to claim 1, wherein said compound is selected from the group consisting of the following:

1-(5-chloro-2-{2-[(2*R*)-4-(4-fluoro-^{18}F-benzyl)-2-methylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;

1-(2-{2-[(2*R*)-4-(4-fluorobenzyl)-2-methylpiperazin-1-yl]-2-oxoethoxy}-5-iodo-^{123}I-phenyl)urea;

2-(2-amino-4-chlorophenoxy)-1-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]ethan-1-one;

2-(2-amino-4-chlorophenoxy)-1-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]ethan-1-one;

2-(2-amino-4-chlorophenoxy)-1-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]ethan-1-one;

2-(2-amino-4-chlorophenoxy)-1-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]ethan-1-one;

2-[4-chloro-2-(diethylamino)phenoxy]-1-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]ethan-1-one;

2-[4-chloro-2-(diethylamino)phenoxy]-1-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]ethan-1-one;

2-[4-chloro-2-(diethylamino)phenoxy]-1-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]ethan-1-one;

2-[4-chloro-2-(diethylamino)phenoxy]-1-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]ethan-1-one;

1-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-(2,4-dichlorophenyl)urea;

1-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-(2,4-dichlorophenyl)urea;

1-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-(2,4-dichlorophenyl)urea;

1-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-(2,4-dichlorophenyl)urea;

1-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;

1-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;

1-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-

oxoethoxy}phenyl)urea;

1-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;

1-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;

1-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;

1-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;

1-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;

1-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}F-benzyl)-2,5,-dimethylpiperazin-1-yl]-2-(2-isopentylamino-4-chlorophenoxy)ethan-1-one;

1-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}F-benzyl)-2,5,-dimethylpiperazin-1-yl]-2-(2-isopentylamino-4-chlorophenoxy)ethan-1-one;

1-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}F-benzyl)-2,5,-dimethylpiperazin-1-yl]-2-(2-isopentylamino-4-chlorophenoxy)ethan-1-one;

1-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}F-benzyl)-2,5,-dimethylpiperazin-1-yl]-2-(2-isopentylamino-4-chlorophenoxy)ethan-1-one;

N-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-methylpropanamide;

N-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-methylpropanamide;

N-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-methylpropanamide;

N-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-methylpropanamide;

N-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(methoxy)acetamide;

N-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(methoxy)acetamide;

N-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}F-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(methoxy)acetamide;

N-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(methoxy)acetamide;

(*E*)-*N*-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-butenamide;

(*E*)-*N*-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-butenamide;

(*E*)-*N*-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-butenamide;

(*E*)-*N*-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-butenamide;

methyl *N*-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)succinamate;

methyl *N*-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)succinamate;

methyl *N*-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)succinamate;

methyl *N*-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)succinamate;

ethyl *N*-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)succinamate;

ethyl *N*-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)succinamate;

ethyl *N*-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)succinamate;

ethyl *N*-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)succinamate;

N-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)acetamide;

N-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)acetamide;

N-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)acetamide;

N-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-

oxoethoxy}phenyl)acetamide;

N-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)propanamide;

N-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)propanamide;

N-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)propanamide;

N-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)propanamide;

N-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-fluorobenzamide;

N-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-fluorobenzamide;

N-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-fluorobenzamide;

N-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-fluorobenzamide;

1-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-(p-tolyl)urea;

1-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-(p-tolyl)urea;

1-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-(p-tolyl)urea;

1-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-(p-tolyl)urea;

1-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-ethylurea;

1-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-ethylurea;

1-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-ethylurea;

1-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-ethylurea;

1-benzyl-3-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;

1-benzyl-3-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;

1-benzyl-3-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;

1-benzyl-3-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;

1-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-(4-nitrophenyl)urea;

1-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-(4-nitrophenyl)urea;

1-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-(4-nitrophenyl)urea;

1-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-3-(4-nitrophenyl)urea;

2-(2-benzylamino-4-chlorophenoxy)-1-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]ethan-1-one;

2-(2-benzylamino-4-chlorophenoxy)-1-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]ethan-1-one;

2-(2-benzylamino-4-chlorophenoxy)-1-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]ethan-1-one;

2-(2-benzylamino-4-chlorophenoxy)-1-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]ethan-1-one;

N-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)glycinamide;

N-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)glycinamide;

N-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)glycinamide;

N-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)glycinamide;

1-(5-chloro-2-{2-[(2*R*)-4-(4-fluoro-^{18}*F*-benzyl)-2-methylpiperazin-1-yl]-2-

oxoethoxy}phenyl)urea;

1-(5-chloro-2-{2-[(2*S*)-4-(4-fluoro-^{18}*F*-benzyl)-2-methylpiperazin-1-yl]-2-oxoethoxy}phenyl)urea;

N-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethyl-piperazin-1-yl]-2-oxoethoxy}phenyl)-2-(methylamino)acetamide;

N-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethyl-piperazin-1-yl]-2-oxoethoxy}phenyl)-2-(methylamino)acetamide;

N-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethyl-piperazin-1-yl]-2-oxoethoxy}phenyl)-2-(methylamino)acetamide;

N-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethyl-piperazin-1-yl]-2-oxoethoxy}phenyl)-2-(methylamino)acetamide;

2-bromo-*N*-(5-chloro-2-{(2*SR*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)acetamide;

2-bromo-*N*-(5-chloro-2-{(2*RS*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)acetamide;

2-bromo-*N*-(5-chloro-2-{(2*SR*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)acetamide;

2-bromo-*N*-(5-chloro-2-{(2*RS*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)acetamide;

N-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(ureido)acetamide;

N-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(ureido)acetamide;

N-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(ureido)acetamide;

N-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(ureido)acetamide;

N-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(1-methylureido)acetamide;

N-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(1-methylureido)acetamide;

N-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(1-methylureido)acetamide;

N-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(1-methylureido)acetamide;

(2*RS*)-*N*-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-aminopropanamide;

(2*SR*)-*N*-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-aminopropanamide;

(2*RS*)-*N*-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-aminopropanamide;

(2*SR*)-*N*-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-aminopropanamide;

(2*RS*)-*N*-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-aminopropanamide;

(2*SR*)-*N*-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-aminopropanamide;

(2*RS*)-*N*-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-aminopropanamide;

(2*SR*)-*N*-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-aminopropanamide;

N-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(2,4-difluorobenzoylamino)acetamide;

N-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(2,4-difluorobenzoylamino)acetamide;

N-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(2,4-difluorobenzoylamino)acetamide;

N-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(2,4-difluorobenzoylamino)acetamide;

N-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(methoxyacetylamino)acetamide;

N-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(methoxyacetylamino)acetamide;

N-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(methoxyacetylamino)acetamide;

N-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-

oxoethoxy}phenyl)-2-(methoxyacetylamino)acetamide;
N-(5-chloro-2-{2-[(2*SR*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(2-iodobenzoylamino)acetamide;
N-(5-chloro-2-{2-[(2*RS*,5*RS*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(2-iodobenzoylamino)acetamide;
N-(5-chloro-2-{2-[(2*SR*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(2-iodobenzoylamino)acetamide;
N-(5-chloro-2-{2-[(2*RS*,5*SR*)-4-(4-fluoro-^{18}*F*-benzyl)-2,5-dimethylpiperazin-1-yl]-2-oxoethoxy}phenyl)-2-(2-iodobenzoylamino)acetamide;
N-(5-chloro-2-{2-[(2*R*)-4-(4-fluoro-^{18}*F*-benzyl)-2-methylpiperazin-1-yl]-2-oxoethoxy}phenyl)glycinamide;
N-(5-chloro-2-{2-[(2*S*)-4-(4-fluoro-^{18}*F*-benzyl)-2-methylpiperazin-1-yl]-2-oxoethoxy}phenyl)glycinamide; and
mono- and dichloride salts thereof.--

32. (Previously Presented): A method according to claim 1, wherein said compound is selected from the group consisting of the following:
N'-(mercaptoeth-1-yl)-*N'*-(5-mercapto-3-aza-2-oxopent-1-yl)-*N*-{5-chloro-2-[2-[4-(4-fluorobenzyl)-2-(2*R*)-methylpiperazin-1-yl]-2-oxoethoxy]phen-1-yl}glycylglycinamide, technetium-99m-complex;
N'-(2-mercaptoeth-1-yl)-*N'*-(5-mercapto-3-aza-2-oxopent-1-yl)-*N*-{5-chloro-2-[2-[4-(4-fluorobenzyl)-2-(2*R*)-methylpiperazin-1-yl]-2-oxoethoxy]phen-1-yl}glycinamide, technetium-99m-complex;
N'-(2-mercaptoeth-1-yl)-*N'*-(5-mercapto-3-azapent-1-yl)-*N*-{5-chloro-2-[2-[4-(4-fluorobenzyl)-2-(2*R*)-methylpiperazin-1-yl]-2-oxoethoxy]phen-1-yl}glycinamide, technetium-99m-complex; and
mono- and dichloride salts thereof.